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TITLE.SURFACE STRUCTURE OF RABBIT VITREO-RETINAL JUNCTION AFTER ENZIMATIC SEPARATION OF INNER LIMITING MEMBRANE.

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Purpose.In order to investigate the structure of the inner limiting membrane (ILM) and the vitreoretinal structure, the ILM was separated from the retina in rabbit specimens by enzymatic digestion with trypsin, after different two fixing bath (fixative).

Methods. Eight adult rabbit eyes were used for the study.Four were fixed before enzyme treatment.Two with 0.1M sodium phosphaste buffered, 0.04% glutardialdehyde 1% paraformaldehyde and two with 0.1 sodium phosphate Buffered 0.08% glutardialdehyde, 1% paraformaldehyde. The specimens were inmersed in 0:1 M phosphate Buffered 0.05% trypsin (Sigma St LOUIS MO USA). Four were fixed but not inmersed in trypsin.Finally, each specimen was sputter-coated with a gold palladium mixture and observed under scanning electron microscope (JROL 401).

Results.The retinal surface without enzymatic treatment. the ILM and the retina are not separated, after enzymatic treatment the IML is separated from the retinal surface and the structures below the IML are exposed.The retinal surface under the IML showed a cobblestone appearance.The inner surface of the ILM showed a very dense fibrous structure.

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COMPARATIVE CLINICOPATHOLOGICAL ANALYSIS OF EPIRETINAL MEMBRANE OF A COMBINED RETINAL-RETINAL PIGMENT EPITHELIAL HAMARTOMA

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Purpose. To examine clinicopathologic features of an overlying epiretinal membrane complicating a combined macular hamartoma of the retina and the retinal pigment epithelium in comparison to membranes of proliferative diabetic retinopathy and idiopathique epiretinal membrane.

Methods. Surgically removed epiretinal membrane during a pars plana vitrectomy associated with peeling of the cortical vitreous, was fixed in liquid nitrogen and further analysed by immunohistochemistry. Stainings were performed using anti- GFAP, LCA, PCNA, cytokeratin, actin and Ki67 antibodies.

Results. Fluorescein angiogram showed severe macular edema and vascular tortuosity were attenuated after membrane peeling. Visual acuity improved to 20/50 from 20/200 (12 months after surgery). Multiple cell layers with no pigmented cells and occasional macrophages were observed. Immunohistochemical features of this membrane were compared to membranes of proliferative diabetic retinopathy and idiopathique epimaculaire membrane .

Conclusions. The immunohistochemical analysis of these membranes suggests different profils with respect tc their glial origin.

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HEPARIN AFFIN REGULATORY PEPTIDE (HARP) IN HUMAN OCULAR TISSUES.

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Background HARP, also called pleiotrophin is a 18 kDa growth factor which possesses mitogenic, angiogenic and neurotrophic activities. It is expressed essentially in the central nervous system during the perinatal period and also found in malignant tumors. Its presence in rat and bovine retina has already been observed.

Purpose To determine the localization of the HARP protein in bovine and human normal ocular tissues.

Methods Affinity-purified polyclonal antibody were used. We performed standard western blot technique on bovine eyes and immunohistochemistry on frozen sections of human eyes from cornea donors.

Results HARP was found in the cytoplasm of retinal ganglion cells, in the outer nuclear layer, and in smooth muscle cells (iris sphincter and dilator and ciliary muscle). Endothelial cell location was uncertain.

Conclusion This study shows the presence of HARP, a newly identified growth factor, in human retina and smooth muscle cells. Its physiological and/or pathological role is not yet known. Further investigations on proliferative retinovitreal membranes are under way.

Supported by : Fondation Pour la Recherche Médicale.

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TITLE: IMMUNOCYTOCHEMICAL AND ELECTRON MICROSCOPIC STUDY OF HUMAN PRERETINAL MEMBRANES IN THE PROLIFERATIVE VITREORETINOPATHY.

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PURPOSE. Light microscopic and ultrastructural studies were perfomed in the human epiretinal membranes secondary to proliferative vitreoretinopathy (PVR). **METHODS.** Human preretinal membranes from 5 eyes with PVR were obtained by vitrectomy. These membranes were processed for inmunohistochemical (GFAP) and electron microscopy studies to study the morphology and the cell composition. **RESULTS.** Light microscopic studies manifested a preretinal membrane with indiferenciated glial cells and some macrophage and retinal pigment epithelial cells. Ultrastructural studies showed mainly glial cells with intermediate filaments that stained with GPAP and retinal pigment epithelial cells. The extracellular matrix was mainly composed of collagen.
CONCLUSIONS. The glia is the main cell component found in the human preretinal membranes from eyes with postsurgical PVR.